NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE SPECIFICATION

GRADE STABILIZATION STRUCTURE

(Acre)

CODE 410

WORKMANSHIP

All structures will be finished in a neat and workmanlike manner.

COMPUTATIONS

The completed quantities shall be the design quantities, unless a change order has been issued to change the volume amount.

ROCK AND BRUSH – 410A

1. MATERIALS

Rock. Rock shall be hard, durable, and approved by the responsible technician prior to placement. Unless otherwise specified on drawings, rock shall have a minimum volume equivalent of a six-inch diameter spherical rock. Fifty percent of the rock placed in the structure shall have a volume equal to or greater than an eight-inch diameter spherical rock. Larger sized rock shall be placed on the weir crest, top, and downstream faces of the structure. Care shall be taken in the placement of all rock on the exposed flow surfaces of the structure to minimize the amount of each rock's face area exposed to flowing water. This is especially important when using rectangular or slab rock to assure that the rocks will not move under high flow conditions.

Brush. The brush used shall be from fresh cut, live evergreen trees, or other approved material, and shall have a maximum stem diameter of 11/2 inches. Brush layers above the base layer shall be placed in sloping layers, with the slope angle being between 20º-45º to the horizontal. Layers shall be sloped so that the raised end of the sloping brush layer is on the downstream side of the dam. Structures built with hand fitted slab or rectangular rock may be constructed with only a base brush layer and no internal brush layers.

2. SITE PREPARATION

A good bond shall be obtained between the banks of the gully and the abutments of the structure by keying the structure into the banks a minimum of 2 feet with a keyway width of 2 feet.

3. PLACING OF MATERIALS.

A complete layer of brush, not exceeding 6" compressed thickness, shall be placed first against the foundation and abutments, with the brush butts alternating upstream and downstream. The base layer of brush shall extend downstream a minimum of 2 feet beyond the downstream toe of the structure. Alternate layers of rock and brush shall be placed against this foundation, with the final layer being rock. Each successive brush layer shall be placed with the brush butts downstream, and the brush layer having a maximum compressed thickness of 3".

LOG DROP – 410L

1. MATERIALS

Logs. The logs shall be structurally sound, reasonably straight, and of the sizes shown on the drawings. They shall be pine, fir, or cedar.

Wire. The wire used for tying the logs shall be galvanized commercial malleable No. 9 wire or heavier.

2. CONSTRUCTION

The site shall be graded and excavated to accommodate logs as shown on the drawings.

The logs shall be attached together, as shown on the drawings, and as directed by the engineer.

All earth backfill around logs shall be moist enough to form a tight ball when squeezed in the hand.

Backfill should be compacted, using hand or power driven tampers, to a density equaling the native embankment. Hand tampers shall not have a face larger than two sq. ft. Routing of heavy equipment over backfill shall not be considered adequate compaction.

3. TOLERANCE

Maximum deviation allowable in elevation of weir crest, abutment walls, and apron will be 0.3 ft. above or below the design elevation.